COMMONWEALTH of VIRGINIA

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COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Virginia Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Virginia Electric and Power Company
Possum Point Power Station
19000 Possum Point Road
Dumfries, Virginia
Permit No. NRO70225

(Revised May 20, 2011 for permit modification expected to be issued May 25, 2011)

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Virginia Electric and Power Company has applied for a Title V Operating Permit for its Possum Point Power Station facility. The Department has reviewed the application and has prepared a proposed Title V Operating Permit.

Engineer/Permit Contact: _____ Date: 5-20-2011
John R. McKie
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Air Permit Manager: _____ 5/25/11 Date:
Terry H. Darton

Regional Director: _____ 5.26.11 Date:
Thomas A. Faha

FACILITY INFORMATION

Permittee
Virginia Electric and Power Company
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Facility
Dominion - Possum Point Power Station
19000 Possum Point Road
Dumfries, Virginia 22060

County-Plant Identification Number: 51-153-0002

SOURCE DESCRIPTION

NAICS Code: 221112 - Electric power generation, fossil fuel.

The facility is an electrical power generation plant that produces power for sale. The significant emissions units of the plant consist of: two natural gas or oil-fired combustion turbine generating units; two natural gas-fired boiler generation units; one oil-fired boiler generation unit; six small, peaking oil-fired combustion turbines; one natural gas-fired auxiliary steam boiler; two natural gas-fired gas pipeline heaters; and four above ground oil storage tanks. There is also a steam turbine generating unit that utilizes steam produced from waste heat exhausted from the two primary combustion turbines and from additional heat supplied as needed by duct burners on the primary combustion turbine exhaust ducts. The duct burners are significant emission units, and for permitting purposes are considered independent of the steam turbine unit, which has no direct emissions associated with it.

The facility is a Title V major source of particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), nitrogen oxides (NO_X), carbon monoxide (CO), volatile organic compounds (VOC), hydrogen chloride (HCl), and hydrogen fluoride (HF). This source is located in a designated "moderate" nonattainment area for the 8-hour ozone standard and a nonattainment area for the $PM_{2.5}$ standard. It is a PSD major source. The facility was previously permitted under: a Consent Agreement (only VOC RACT part still in force) signed 6/12/95; State Operating Permits issued 7/21/00 and 9/26/00; a Prevention of Significant Deterioration/Non-attainment Permit issued on 10/05/01 and amended on 11/18/02, 12/8/04, 7/11/08 and 5/20/11, a Phase-II Acid Rain Permit issued 2/28/03; and subject to a federally-enforceable Consent Decree issued 10/10/03.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In

addition, all reports and other data required by permit conditions or regulations, which are submitted to the DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment / Utility Units							
ES-3	EP-3	(Unit 3) Tangentially-fired natural gas boiler - Combustion Engineering – built 1955, converted from coal firing in 2003.	1,150 million Btu/hr	Low-NO_X burners	N/A	NO_X	Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NO_X RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03; Consent Decree, 10/10/03
ES-4	EP-4	(Unit 4) Tangentially-fired natural gas boiler - Combustion Engineering – built1962, converted from coal firing in 2003.	2,350 million Btu/hr	Low-NO_X burners	N/A	NO_X	Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NO_X RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03; Consent Decree, 10/10/03
ES-5	EP-5	(Unit 5) Tangentially-fired oil boiler - Combustion Engineering – built 1975. Fired w/ No.6 fuel oil during normal operation; No. 2 fuel oil during ignition and flame stabilization.	8,500 million Btu/hr (860 million Btu/hr during flame stabilization.)	Multicyclone – Universal Oil Product	EC-5	PM, PM_{10}, Pb, As, Co, Mn, Ni, Se	Permit to Construct & Operate, 2/7/73; Consent Agreement (VOC RACT part, only), 6/12/95; State Operating Permit (NO_X RACT), 7/21/00; State Operating Permit (Ozone Attainment), 9/26/00; Phase-II Acid Rain Permit, 2/28/03

ES-6	EP-6	(Unit 6) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00
ES-7	EP-7	(Unit 7) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00
ES-8	EP-8	(Unit 8) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00
ES-9	EP-9	(Unit 9) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00
ES-10	EP-10	(Unit 10) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00
ES-11	EP-11	(Unit 11) No.2 oil-fired combustion turbine – General Electric Model MS5001L – built 1968	245 million Btu/hr at 80°F inlet	None	-	-	State Operating Permit (Ozone Attainment), 9/26/00

ES-13	EP-13	(Unit 6A) Combined Cycle Combustion Turbine – General Electric Model PG7241 (FA) - fired w/natural gas or distillate fuel oil - built 2003	1,937 million Btu/hr on gas; 2,080 million Btu/hr on oil	Selective Catalytic Reduction (SCR)	SCR 6A	NO_X	State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03
ES-14	EP-14	(Unit 6B) Combined Cycle Combustion Turbine – General Electric Model PG7241 (FA) - fired w/natural gas or distillate fuel oil – built 2003	1,937 million Btu/hr on gas; 2,080 million Btu/hr on oil	Selective Catalytic Reduction (SCR)	SCR 6B	NO_X	State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03
ES-15	EP-13	Natural gas-fired duct burners installed in Unit 6A heat recovery steam generator downstream of the combustion turbine – built 2003.	385 million Btu/hr	Selective Catalytic Reduction (SCR)	SCR 6A	NO_X	State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03
ES-16	EP-14	Natural gas-fired duct burners installed in Unit 6B heat recovery steam generator downstream of the combustion turbine – built 2003.	385 million Btu/hr	Selective Catalytic Reduction (SCR)	SCR 6B	NO_X	State Operating Permit (Ozone Attainment), 9/26/00; Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11); Phase-II Acid Rain Permit, 2/28/03
ES-17	EP-17	Natural gas-fired gas pipeline heater – built 2003	11.85 million Btu/hr	None	-	-	Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11)
ES-18	EP-18	Natural gas-fired gas pipeline heater – built 2003	17.37 million Btu/hr	None	-	-	Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11)
ES-19	EP-19/22	Horizontally-fired gas auxiliary boiler – built 2003	99 million Btu/hr	None	-	-	Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11)

Process Units							
ES-12a	-	Coal Handling - Railcar Unloading (car shaker)	600 tons/hr	Partial enclosure	-	PM	None
ES-12b	-	Coal Handling – Crushing (coal crusher)	750 tons/hr	Double enclosure	-	PM	Minor NSR Permit to Modify and Operate, 9/18/98
ES-12c	-	Coal Handling – Conveying System	600 tons/hr	Enclosure	-	PM	None
ES-12d	-	Coal Handling – Coal Pile	-	-	-	-	None
Petroleum Storage Tanks							
ES-26	-	No. 2 Fuel Oil Storage Tank (constructed with Unit 6A & B combustion turbines)	2 million gallons	None	-	-	Prevention of Significant Deterioration/Non-attainment Permit, 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08 and 5/20/11)
ES-27	-	No. 6 Fuel Oil Storage Tank	21 million gallons	None	-	-	-
ES-28	-	No. 6 Fuel Oil Storage Tank	21 million gallons	None	-	-	-
ES-29	-	No. 2 Fuel Oil Tank	1,015,000 gallons	None	-	-	-

EMISSIONS INVENTORY

Copies of the 2005 and 2007 annual emission updates are attached. Emissions are summarized in the following tables. (The 2005 actual emissions were shown in the draft statement of basis that went to public participation. An update showing 2007 emissions follows in tables beginning on the next page.)

2005 Actual Emissions

	Criteria Pollutant Emissions in Tons/Year					
Emission Unit	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	NO_x
Unit 3 (ES-3)	0.12	0.95	0.10	1.84	1.83	31.2
Unit 4 (ES-4)	0.34	2.03	0.30	3.65	3.65	43.3
Unit 5 (ES-5)	42.02	278.67	6,086.00	253.82	184.67	1,771.70
Unit 6 (ES-6)	0.00	0.01	0.01	0.03	0.03	1.90
Unit 7 (ES-7)	0.00	0.01	0.01	0.05	0.05	3.44
Unit 8 (ES-8)	0.00	0.01	0.01	0.03	0.03	1.90
Unit 9 (ES-9)	0.00	0.01	0.01	0.03	0.03	2.42
Unit 10 (ES-10)	0.00	0.98	0.01	0.04	0.04	2.61
Unit 11 (ES-11)	0.00	0.01	0.01	0.04	0.04	3.05
Unit 6A (ES-13)	1.86	75.06	2.90	34.64	34.64	57.3
Unit 6B (ES-14)	2.77	95.61	2.90	24.71	24.71	46.80
Aux. Boiler (ES-19)	0.40	9.66	0.09	0.74	0.74	2.84
Pipeline Htr – 17.33 mmBtu (ES-18)	0.06	0.87	0.01	0.08	0.08	0.86
Pipeline Htr – 11.85 mmBtu (ES-17)	0.03	0.48	0.00	0.04	0.04	0.43
Total	47.6	464.3	6,092.3	319.7	250.57	1969.7

Source: DEQ's CEDS Database, 2005 Emissions Inventory for Possum Point Power Station.

2005 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Yr
Hydrochloric Acid (HCl)	19.1
Hydrogen Fluoride (HF)	2.1
Formaldehyde	1.8 †

Source: DEQ's CEDS Database, 2005 Emissions Inventory for Possum Point Power Station.

† Includes only emissions from Unit 5. Total VOC emissions from the other fuel burning units are only reported to have been 5.58 tons in 2005, of which some fraction would have been formaldehyde.

2007 Actual Emissions

	Criteria Pollutant Emissions in Tons/Year					
Emission Unit	VOC	CO	SO_2	PM_{10}	$PM_{2.5}$	NO_x
Unit 3 (ES-3)	0.15	1.01	0.10	2.25	2.25	38.9
Unit 4 (ES-4)	0.76	2.52	0.60	8.18	8.18	111.2
Unit 5 (ES-5)	13.1	87.8	1,928.9	79.4	57.4	561.6
Unit 6 (ES-6)	0.00	0.01	0.15	0.04	0.04	2.54
Unit 7 (ES-7)	0.00	0.01	0.10	0.02	0.02	1.78
Unit 8 (ES-8)	0.00	0.01	0.14	0.03	0.03	2.37
Unit 9 (ES-9)	0.00	0.00	0.06	0.02	0.02	1.12
Unit 10 (ES-10)	0.00	0.00	0.06	0.02	0.02	1.10
Unit 11 (ES-11)	0.00	0.01	0.08	0.02	0.02	1.43
Unit 6A (ES-13)	2.37	94.02	3.70	41.23	41.23	52.00
Unit 6B (ES-14)	1.71	126.06	14.80	30.52	30.52	61.90
Aux. Boiler (ES-19)	0.43	10.52	0.10	0.81	0.81	3.09
Pipeline Htr – 17.33 mmBtu (ES-18)	0.09	1.33	0.01	0.12	0.12	1.31

Pipeline Htr – 11.85 mmBtu (ES-17)	0.01	0.13	0.00	0.01	0.01	0.11
Total	18.1	323.4	1948.8	162.7	140.7	840.45

Source: DEQ's CEDS Database, 2007Emissions Inventory for Possum Point Power Station.

2007 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Yr
Hydrochloric Acid (HCl)	5.9
Hydrogen Fluoride (HF)	0.6
Formaldehyde	2.3
Toluene	1.2

Source: DEQ's CEDS Database, 2007 Emissions Inventory for Possum Point Power Station.

EMISSION UNIT APPLICABLE REQUIREMENTS - UNITS 3 and 4 (ID#'s ES-3 and ES-4)

Limitations

Title V Permit Condition Number(s)	Description, rationale, and source of requirement.
III.A.1	Sets VOC control methods for RACT as required by 9 VAC 5-40-300. The condition is from Section E, Paragraph 5, of the 6/5/95 Consent Agreement (CA). That agreement was largely vacated by letter from the DEQ dated 10/31/96, but the VOC portion of the agreement remained in effect. Units 3 and 4 were modified in 2003 under authority of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. Under that permit the modification was approved by U.S. EPA as a "pollution control project" (PCP), therefore, not subject to LAER. The units were still evaluated for BACT under state regulations, but the proposed NOx controls were determined to represent BACT for VOC, so no VOC-specific control measures were included in the permit. Therefore, the VOC requirement of the 6/5/95 CA has not been streamlined out.
III.A.2	Sets NO_X control methods for BACT as required by 9 VAC 5-50-260. The condition is from Condition 5 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and Condition 5 (for Unit 4 only) of the 7/21/00 State Operating Permit implementing RACT.
III.A.3.	Restricts fuel type to ensure possibility of complying with emission limits of this permit and to meet the requirement of the Consent Decree issued 10/10/03 that requires switching to natural gas by May 1, 2003. Condition is from Condition 18 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit with an addition citing the requirements in Paragraph 97 of the Consent Decree issued 10/10/03 if fuel-switching occurs in the future.
III. A. 4 & 5	Sets emission limits as follow: PM – Particulate matter (PM) here is as defined at 9 VAC 5-10-20, i.e., having aerodynamic diameter less than 100 micrometers. Hourly emission rate limits are set by formula in 9 VAC 5-40-900 B for individual units constructed prior to October 5, 1979. *(See 9 VAC 5-40-890 C.)* Units 3 and 4 were constructed prior to 1979 and modified in 2003. The permit to modify did not address PM, so by 9 VAC 5-40-10 B, applicable limits under 9 VAC 5, Chapter 40 still apply. The rated capacities, taken from page 3 of the 2002 revised application are 1150 and 2350 million Btu/hr for Units 3 and 4, respectively. With the addition of Unit 5, for which the same application page shows a rated capacity of 8500 million Btu/hr, the "total capacity" *(See 9 VAC 5-40-890 C.)* of the installation is more than 10 billion Btu/hr, so the applicable emission ratio to be used for 9 VAC 5-40-900 B is found at 9 VAC 5-40-900 A.2.c, i.e., 0.1 pounds of particulate per million Btu's input. It

should be noted that since the 2003 modification, these units can burn only gas and no longer have active particulate controls, so the collection equipment efficiency factor used in 9 VAC 5-40-900 B.2 defaults to 1. *(See 9 VAC 5-40-920.)* The 0.1 pounds of particulate per million Btu's input emission ratio is technically only a limit for the whole installation (all pre-1979 units combined), but is included as a PM limit in this permit for each unit, because an individual unit cannot comply with 9 VAC 5-40-900 B.2 if its PM to heat input rate exceeds the installation emission ratio.

PM-10 – Condition 23 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment (NA) permit includes an annual PM-10 limit for both units combined commensurate with good combustion practice at continuous year-round operation. That PSD/NA permit limit represents a decrease in PM-10 emissions from the pre-modification emissions, so PM-10 BACT was not required, but an annual limit was necessary in the permit to guarantee that the decrease is real. The PM-10 limit of the PSD/NA permit is the annual PM-10 limit in the Title V permit. There is no short-term PM-10 limit in the PSD/NA permit or in other applicable requirements.

SO_2 – There is no applicable short-term limit specific to these units. 9 VAC 5-40-930 applies to the whole fuel burning equipment installation (all pre-1979 units combined). Therefore, compliance with a short-term SO_2 limit is considered for these units only in conjunction with the other pre-1979 units (Unit 5 and the peaking CT's) and is covered in the section called "All Fuel Significant Fuel Burning Units." These units burn pipeline natural gas only, so their maximum hourly SO_2 emissions are only about 1 and 2 lbs/hr, respectively. Condition 23 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment (NA) Permit includes an annual SO_2 limit for both units combined that is commensurate with good combustion practice at continuous year-round operation. The PSD/NA permit limit represents a decrease in SO_2 emissions, so SO_2 BACT was not required, but an annual limit was necessary in the PSD/NA permit to guarantee that the decrease is real. The SO_2 limit of the PSD/NA permit is the annual SO2 limit in the Title V permit.

NO_X – The short-term (lbs/mmBtu) NO_X limits are based on RACT limits found at 9 VAC 5-40-311 C. A state operating permit (SOP) was issued on 7/21/00 that states that the RACT limits found at 9 VAC 5-40-311 C, which vary according to fuel type, would apply year-round once the permit was adopted into the federal SIP. The units can now fire only natural gas, so only the RACT limit for natural gas (.20 lbs/mmBtu) applies. The RACT SOP was adopted into the SIP on January 1, 2001, so the RACT limits apply year-round. The 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit did not address short-term NO_X, so the SOP prevails. The PSD/Non-attainment (NA) Permit contains annual NO_X limits for both units combined in order to enforce the decrease in NO_X emissions that exempted those emissions from BACT and LAER. The combined annual PSD/NA permit NO_X limit is streamlined out of the

Title V permit in deference to the more stringent combined annual limit found in the Consent Decree issued October 10, 2003 (*United States v. Virginia Electric Power Co., Civ. A. Nos. 03-517 & 03-603-A (E.D. Va.)*). A footnote to these conditions in the Title V permit notes that a more stringent NO_X emission limit (lbs/million Btu) in a later condition applies to the plant as a whole during the period of May through September.

CO – Both the short-term and annual CO emission limits are from Condition 23 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The hourly and annual rate limits were confirmed by dispersion modeling for that permitting action to keep the facility from contributing to a violation of the NAAQS. The heat input-based limits represent BACT.

VOC - Both the short-term and annual VOC emission limits are from Condition 23 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The short-term limit represents BACT. LAER was unnecessary, despite being in an ozone nonattainment area, because the project was approved by U.S. EPA as a "pollution control project" (PCP). The annual limit for the units combined ensures that the emissions offsets obtained are sufficient.

The short-term emission limits in these conditions do not apply during periods of start-up, shutdown, and malfunction. This qualifier is from Condition 23 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. It was approved by U.S. EPA Region-III, so long as emissions during those periods were still subject to the annual limits, which they are.

III.A.6. Defines start-up and shutdown for Units 3 and 4. It derives from Condition 6 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and the stable minimum load was reported to the DEQ by Dominion letter dated June 12, 2003.

III.A.7 Sets visible emission opacity limits. It is from Condition 30 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The limits are more stringent than 9 VAC 5-50-80, because only natural gas is fired, so opacity greater than 10% would indicate that good combustion practices were not being followed (possible violation of 9 VAC 5-50-20 E).

Monitoring

III.B.1 Requires monitoring of SO_2 by a method allowed in 40 CFR 75.11(d) for gas-fired units. Options include continuous emission monitoring system (CEMS) or methods based on fuel monitoring found at 40 CFR Appendix D. The options

under 40 CFR 75.11(d) are presumed by the DEQ to comply with 9 VAC 5-50-40, as well as the Monitoring Requirements section of the 2/28/03 Phase-II Acid Rain Permit. Prior to 2003 the units were fired on coal and CEMS were used to satisfy the applicable monitoring requirements. The DEQ was informed by letter dated March 24, 2003, that fuel sampling would replace the CEMS for SO_2 emissions determinations.

III.B.2. States requirement for continuous emission monitoring system (CEMS) for NO_X found in Condition 40 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit while satisfying similar requirements of Condition 10 of 7/21/00 State Operating Permit; and Monitoring Requirements section of the 2/28/03 Phase-II Acid Rain Permit.

III.B.3. States requirement for continuous emission monitoring system (CEMS) requirement for CO found in Condition 40 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.B.4 Requires CO_2 monitoring by a method provided in 40 CFR 75. It is only for Acid Rain permitting purposes, but is included in this section of the permit so the reader is made aware in one place of all major monitoring requirements covered by this 9 VAC 5 Chapter 80, Article 3 permit.

III.B.5 Ensures that Part 75 quality control requirements are met for NO_X CEMS, CO is not subject to Part 75, but per the amendments of 7/11/08 to the PSD permit issued 10/05/08 and authority granted at 9 VAC 5-50-40 E.10, some Part 75 quality control requirements that can be applied to CO CEMS are applied in this case, as well as appropriate Part 60 requirements. This condition is based on Condition 42 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.B.6 Requires periodic visual observation, unless a continuous opacity monitor is installed, to check for visible emissions and to follow up, as warranted, with a visible emissions evaluation (VEE) for opacity limit compliance purposes. It is from Condition 40 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. Besides demonstrating compliance with the opacity limit, this condition serves as periodic monitoring for problems that indicate a potential for noncompliance with the emission limit for PM_{10}. If one is required, the VEE must be conducted for at least 12 minutes. The averaging time in Method 9 for opacity is six minutes. However, the permittee is allowed one six-minute period each hour in which the opacity may be between 10 and 20 percent. If only one six-minute evaluation were conducted and it showed an opacity between 10 and 20 percent, the permittee could claim that the evaluated six-minute period represents the six-minute period of greater than 10 percent opacity that is allowed in an hour. At least one more six-minute evaluation would be necessary to show that the remainder of the hour might be no greater than 10 percent. One could argue that at least an hour evaluation should be conducted to

prove that the opacity does not exceed 10 percent for more than one six-minute period per hour. However, a one-hour evaluation really doesn't prove that point, because it may be that the particular hour chosen for the evaluation had an unusually low number of six-minute periods of above 10 percent. More hours would have to be evaluated to represent a statistically-significant sample. In the interest of not being unnecessarily burdensome, the DEQ assumes that if the opacity remains at or below 10% for at least six minutes, that it is usually at or below 10%. At the same time, the DEQ recognizes that an occasional spike of higher opacity could occur during a six-minute period being evaluated, without necessarily meaning the unit is out of compliance.

Recordkeeping

The permit includes requirements (Conditions III.C.1-3) for maintaining records of all monitoring and testing required by the permit. For Units 3 and 4 these records include:

Monthly and annual fuel throughput
CEMS calibrations
Periodic visible emissions checks
Stack tests, VEE's, and CEMS performance evaluations, as required
Occurrence of start-up, shutdown, malfunction, and monitors out of service.

Also included is the requirement in Condition III.C.1.b that emissions be calculated monthly in order that the permittee and an inspector can determine periodically that the unit is in compliance with the emission standards.

Testing

III.D.1 States that the units must be maintained to allow emissions testing. It is a continuation of Condition 52 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, consistent with 9 VAC 5-50-30 F.

III.D.2 Requires periodic testing of VOC emissions to demonstrate compliance with VOC limits upon which offset requirements are based. The requirement is authorized by 9 VAC 5-50-30 G and is consistent with 9 VAC 5-80-490 E.2.

III.D.3 A table of test methods has been included in the permit in case other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

III.E.1 A quarterly excess emissions report (EER) is required for continuous monitor systems data. The condition is taken from Condition 43 of the10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and 9 VAC 5-50-50 C, but does not refer to 40 CFR 60.7(d) or 13(h), because these units are not subject to an NSPS.

III.E.2. Stipulates how RACT compliance data must be reported. The condition derives from Condition 10 of 7/21/00 State Operating Permit and does not supplant NOx reporting in EER's or for Acid Rain.

EMISSION UNIT APPLICABLE REQUIREMENTS – Unit 5 (ID# ES-5)

Note: This unit has never been significantly modified and was unaffected by the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Limitations

III.F.1 Requires continued use of multicyclone or equivalent. Per exception paragraphs 6 and 7 under the definition of modification at 9 VAC 5-80-1110, removal or replacement of control equipment necessary to comply with applicable regulations would be a "modification," and therefore subject to permitting.

III.F.2 Sets VOC RACT as required by 9 VAC 5-40-300. The condition is from Section E, Paragraph 5, of the 6/5/95 Consent Agreement (CA). That agreement was largely vacated by letter from the DEQ dated 10/31/96, but the VOC portion of the agreement remained in effect.

III.F.3 Sets NO_X RACT as required by 9 VAC 5-40-310. The condition is from Condition 7 of the 7/21/00 State Operating Permit.

III.F.4 Limits fuel type to fuel oil. The condition is derived from the first paragraph of the 2/7/73 Permit to Construct & Operate.

III.F.5 Sets emission limits as follow:

PM – Particulate matter (PM) here is as defined at 9 VAC 5-10-20, i.e., having aerodynamic diameter less than 100 micrometers. The heat input-based limit is from 40 CFR 60.42(a)(1), applicable new source performance standard. The hourly emission rate limit is set by formula in 9 VAC 5-40-900 B for individual units constructed prior to October 5, 1979. *(See 9 VAC 5-40-890 C.)* Unit 5 was constructed prior to 1979 and unaffected by the plant modification completed in 2003. Units 3 and 4 were modified in 2003, but the permit to construct and operate did not address PM, so the heat capacities of those units are lumped in with that of Unit 5 when determining the applicable fuel-burning installation capacity under 9 VAC 5-40-900. The rated capacities, taken from page 3 of the 2002 revised application are 1150, 2350, and 8500 million Btu/hr for Units 3, 4 and 5, respectively. The "total capacity" *(See 9 VAC 5-40-890 C.)* of the installation is more than 10 billion Btu/hr, so the applicable emission ratio to be used for 9 VAC 5-40-900 B is found at 9 VAC 5-40-900 A.2.c, i.e., 0.1 pounds of particulate per million Btu's input. The 0.1 pounds of particulate per million Btu's input emission ratio is technically only a limit for the whole installation (all pre-1979 units combined), but is included as a PM limit in this permit for each unit, because an individual unit cannot comply with 9 VAC 5-40-900 B.2 if its PM to heat input rate exceeds the installation emission ratio.

SO_2 – The short-term limit is a heat input-based limit from 40 CFR 60.42(a)(1), applicable new source performance standard. There is an applicable hourly emission rate limit at 9 VAC 5-40-930, but under all circumstances it is less stringent than the NSPS, therefore, streamlined from the Title V permit. The only annual standard is in the Acid Rain permit.

NO_X – The short-term NO_X limit averaged over a three-hour period (.30 lbs/mmBtu) is from 40 CFR 60.44(a)(2), applicable new source performance standard. The three-hour averaging period derives from three runs (40 CFR 60.8 (f)) of one hour each (40 CFR 60.46). The short-term NO_X limit averaged over a calendar day (.25 lbs/mmBtu) is based on RACT limits found at 9 VAC 5-40-311 C. A state operating permit (SOP) was issued on 7/21/00 that states that the RACT limits found at 9 VAC 5-40-311 C, which vary according to fuel type, would apply year-round once the permit was adopted into the federal SIP. The unit can fire only oil, so only the RACT limit for tangential firing of oil applies. The RACT SOP was adopted into the SIP on January 1, 2001, so the RACT limit applies year-round. A footnote to this condition in the Title V permit notes that a more stringent NO_X emission limit in a later condition applies to the plant as a whole during the period of May through September.

III.F.6. Sets visible emission opacity limits. Limits are same as at 40 CFR 60.42.

Monitoring

III.G.1 Requires monitoring of SO_2 by a method allowed in 40 CFR 75.11(d) for oil-fired units. Options include continuous emission monitoring system (CEMS) or methods based on fuel monitoring found at 40 CFR Appendix D. The options under 40 CFR 75.11(d) are presumed by the DEQ to comply with 9 VAC 5-50-40, as well as the Monitoring Requirements section of the 2/28/03 Phase-II Acid Rain Permit.

III.G.2 Requires continuous emission monitoring system (CEMS) for NO_X to satisfy requirements at 9 VAC 5-40-1000 B, Condition 10 of 7/21/00 State Operating Permit, and Monitoring Requirements section of the 2/28/03 Phase-II Acid Rain Permit.

III.G.3 Requires CO_2 monitoring by a method provided in 40 CFR 75. It is only for Acid Rain permitting purposes, but is included in this section of the permit so the reader is made aware in one place of all major monitoring requirements covered by this 9 VAC 5 Chapter 80, Article 3 permit.

III.G.4 Requires continuous opacity monitoring. The condition satisfies 9 VAC 5-40-1000 C, 40 CFR 60.45, and 40 CFR 60.75 .14.

Recordkeeping

The permit includes requirements (Conditions III.H.1- 4) for maintaining records of all monitoring and testing required by the permit. For Unit 5 these records include:

Fuel throughput
Fuel supplier certifications
CEMS calibrations and operating time, and excess emissions
Stack tests, VEE's, and CEMS performance evaluations, as required
Occurrence of start-up, shutdown, malfunction, and monitors out of service.
Fuel oil data, including sulfur content, for each shipment received

Also included is the requirement in Condition III.H.1 that emissions be calculated monthly in order that the permittee and an inspector can determine periodically that the unit is in compliance with the emission standards.

Testing

III.I.1 Requires periodic testing of PM emissions to demonstrate compliance with the short-term PM limits of Condition III.F.5. A frequency of twice per five calendar years had been stated in the draft permit for public comment, but the applicant commented that the frequency should be limited to only once per five years like it is in the EPA-accepted Title V permit for the similar unit at Dominion's Yorktown Power Station in Virginia, This Possum Point Title V permit was revised to be consistent with the Yorktown Station requirement.

III.I.2 A table of test methods has been included in the permit in case other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

III.J.1 A quarterly excess emissions report (EER) is required for continuous monitor systems data. The condition derives from 9 VAC 5-50-50, but some language has been modified to make it more consistent with similar conditions in this permit based on Condition 43 of the10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. However one unique feature of this particular condition is that if the CEMS used for determining SO_2 emissions for Acid Rain purposes is not also used to determine compliance with the SO_2 limit in Condition III.F.5, it is not subject to this reporting condition.

III.J.2. Stipulates how RACT compliance data must be reported. The condition derives from Condition 10 of 7/21/00 State Operating Permit and does not supplant NOx reporting in EER's or for Acid Rain.

EMISSION UNIT APPLICABLE REQUIREMENTS – Units 6, 7, 8, 9, 10 & 11 (ID#'s ES-6, 7, 8, 9, 10 and 11)

Note: These units are old, small, simple-cycle, oil-fired combustion turbines used only for "peak" power. Unit 6 here is not the same as the combined cycle system often referred to collectively as " Unit 6." The latter is composed of Units 6A and 6B (ID#'s 13 & 14), newer and much larger combustion turbines, and associated heat recovery equipment, duct burners (ID#'s 15 & 16), and steam turbine. Units 6 – 11 have never been significantly modified and were unaffected by the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Limitations

III.K.1 Sets emission limits as follow:

PM – Particulate matter (PM) here is as defined at 9 VAC 5-10-20, i.e., having aerodynamic diameter less than 100 micrometers. Hourly emission rate limits are set by formula in 9 VAC 5-40-900 B for individual units constructed prior to October 5, 1979. *(See 9 VAC 5-40-890 C.)* Units 6 - 11 were constructed prior to 1979. The rated capacities for these units from page 3 of the 2002 revised application are 245 million Btu/hr, each; and the rated capacities of Units 3, 4, and 5 are 1150, 2350, and 8500 million Btu/hr, respectively. The "total capacity" *(See 9 VAC 5-40-890 C.)* of the installation is more than 10 billion Btu/hr, so the applicable emission ratio to be used for 9 VAC 5-40-900 B is found at 9 VAC 5-40-900 A.2.c, i.e., 0.1 pounds of particulate per million Btu's input. These units do not have particulate controls, so the collection equipment efficiency factor used in 9 VAC 5-40-900 B.2 defaults to 1. *(See 9 VAC 5-40-920.)* The 0.1 pounds of particulate per million Btu's input emission ratio is technically only a limit for the whole installation (all pre-1979 units combined), but is included as a PM limit in this permit for each unit, because an individual unit cannot comply with 9 VAC 5-40-900 B.2 if its PM to heat input rate exceeds the installation emission ratio.

SO_2 – There is no applicable short-term limit specific to these units. 9 VAC 5-40-930 applies to the whole fuel burning equipment installation (all pre-1979 units combined). Therefore, compliance with a short-term SO_2 limit is considered for these units only in conjunction with the other pre-1979 units (Unit 5 and the peaking CT's) and is covered in the section called "All Fuel Significant Fuel Burning Units." These units are not subject to Acid Rain emissions allocations, nor do any other annual limits apply.

NO_X – There is no applicable limit specific to these units. However, there is a NO_X emission limit in a later condition of this permit that applies to the plant as a whole during the period of May through September. The reader is directed by a note in this condition to see the later condition, so as not to assume that there are no applicable NO_X limits.

III.K.2. Sets visible emission opacity limits. The condition derives from 9 VAC 5-40-940 B and the exemption for startup, shutdown, and malfunction found at 9 VAC 5-40-20 A.4.

Monitoring

III.L.1. Requires a two minute visual observation of the stack exhaust of each unit that operates 20 or more hours per year and whenever testing units to verify unit operability. Units are to be observed using 40 CFR 60 Appendix A Method 22 at least once during each 200 hours of operation in a year. If any visible emissions are observed, either immediate corrective action must be taken to stop visible emissions or a person certified to use 40 CFR 60 Appendix A Method 9 must conduct at least a six minute visual emissions evaluation (VEE) using Method 9. If the six minute VEE is out of compliance with the limits of III.K.2,, at least another 18 minutes of VEE must be conducted to determine compliance and the results recorded. This condition is for the purpose of periodically demonstrating compliance with the opacity limits of Condition III.K.2. It is also, in conjunction with results of VEE's conducted with the PM emissions testing required at Condition III.N.1, useful for unofficially determining the likelihood of compliance with the PM emission limits of Condition III.K.1.

III.L.2 Requires sampling of fuel shipments and states how a shipment is to be defined. It is not from a specific applicable requirement, but is included by applicant request per 9 VAC 5-40-50 E and satisfies 9 VAC 5-80-110 E.

Recordkeeping

The permit includes requirements (Conditions III.M.1 and 2) for maintaining records of all monitoring and testing required by the permit. For Units 6 through 11 these records include:

Fuel oil data, including sulfur content, for each shipment received
Visual emissions observations
Stack tests and VEE's, as required

Testing

III.N.1 Requires periodic testing of PM emissions to demonstrate compliance with the short-term PM limits of Condition III.K.1. The period between tests, five years, may seem long, but these units are operated infrequently, consequently the cost to benefit ratio would be very high for more frequent testing. In fact, this condition has been modified from the version issued on January 20, 2009, to exempt the units from any emissions testing during the term of the permit if the units do not operate more than 87 hours each, or 522 hours in combination, during any year of

the term of the permit. If the 522 combined hours threshold is exceeded, at least two units must be tested; whereas, if only the 87 hours threshold is exceeded, only the unit in excess must be tested. If testing of any unit indicates emissions in excess of 85% of a permit limit, the possibility exists that another might exceed 100% of the limit, so all units must be tested during the term of the permit, regardless of hours of operation. A black start, meaning a start-up of units when no other generating units at the plant are operating due to a failure in the electrical system to which the plant is connected, will not count toward the 87 hour or 522 hour thresholds that trigger testing requirements. This modification to Condition III.N.1 was made: because the permittee applied for some relief from the burden of the condition as originally issued; because DEQ recognizes that the design of these 1960's era combustion turbines makes emissions testing very difficult; and, because it serves as an incentive to minimize the operation of these older units. The applicant asserted during the public comment period (February 14 – March 14, 2007) for the permit as issued on January 20, 2009, that emissions performance testing is not necessary at all. The DEQ does not agree with the assertion, since the amount of emissions is not otherwise known for these units, but DEQ does recognize that the cost-to-benefit ratio of performing such difficult testing is exceedingly high if the units operate less than 87 hours per year. The modification is the result of much discussion between DEQ and the permittee. As mentioned above, there is also a requirement at Condition III.L1.b for visual emissions observations (VEO). The purpose of the VEO is for compliance with opacity requirements, not PM emission limits. However, the DEQ is authorized by 9 VAC 5-40-30 G to require an interim stack test if opacity is a chronic problem, regardless of exemptions in this condition. Furthermore, this condition requires a visible emissions evaluation (VEE) with the PM emissions testing, if required,, which will serve to determine compliance with Condition III.K.2 and provide some basis for correlating PM emissions to opacity, but not for purposes of officially determining compliance with emission limits of Condition III.K.1.

III.N.2 A table of test methods has been included in the permit in case other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

III.O.1 Requires annual reporting of operating hours and capacity to provide evidence that the units remain exempt from RACT per 9 VAC 5-40-7430 B.3.a.

III,O.2 Added as part of the modification to the permit issued January 20, 2009, is this condition that states how test results conducted (if required) for Condition III.N.1 are to be reported.

III.O.3 Added as part of the modification to the permit issued January 20, 2009, is this condition that requires reporting of the circumstances of the black start operation for which the permittee is claiming exemption from counting hours of operation toward the total that determines if PM testing is required at Condition III.N.1.

EMISSION UNIT APPLICABLE REQUIREMENTS – Units 6A & 6B (ID#'s ES-13 & 14)

Note: These units are not the same as Unit 6 (ID# ES-6), which is one of the six old, small, simple-cycle, oil-fired combustion turbines used only for "peak" power. Units 6A and 6B, sometimes referred to jointly as "Unit 6," are large combined-cycle combustion turbine units, which began operation in 2003 under the 10/05/01 (amended 11/18/02, 12/8/04, 7/11/08, and 5/20/2011) PSD/Non-attainment Permit.

III.P.1 Sets NO_X control methods for BACT as required by 9 VAC 5-50-260. The condition is from Condition 3 of the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.P.2 & P.3 Restricts fuel type for the combustion turbines and for the duct burners to ensure possibility of complying with emission limits of this permit, and in the case of the combustion turbines, the fuel sulfur limit at 40 CFR 60.333(b). Conditions are from Conditions 14 and 15 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.P.4 & P.5 Restricts fuel throughput for the combustion turbines and for the duct burners to ensure possibility of complying with emission limits of this permit. Conditions are from Conditions 10 and 11 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III. P.6 Sets limits on stack emissions of PM-10, SO_2, NO_X, CO, VOC, and formaldehyde from the combustion turbines and the duct burners according to which fuel is used and whether the duct burners are on. The duct burners do not operate when the combustion turbines fire oil, so there are no limits given for that situation. The short-term limits are for each unit (6A or 6B) by itself; the annual limits are for the combination of the two. All of the limits are taken from Condition 21 of the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and were in that permit for the following reasons:

PM-10 and CO The short-term limits were established as BACT. Both the short-term and annual limits are rates that were modeled to demonstrate compliance with the NAAQS, and in the case of PM-10, the allowable PSD increment.

SO_2 and NO_X The short-term limits were established as BACT and ensure compliance with NSPS (40 CFR 60 Subpart GG) emission limits. The annual limits derive from the BACT limits and in combination with other limits of that permit ensure that the basis for netting out of PSD remains valid.

VOC The short-term limits were established as LAER. The annual limit ensures that the obtained offsets are sufficient.

Formaldehyde The short-term limits were established as BACT and ensure compliance with the significant ambient air concentration (SAAC) found at 9 VAC

5-60-330. Compliance with these limits also ensures compliance with the other "toxics" regulated at 9 VAC 5-60-320, by virtue of formaldehyde having a greater emission rate to SAAC ratio than any other toxic. *(Note: compliance with 9 VAC 5-60-320 and 330 is not federally-enforceable and is mentioned here for informational purposes only.)* The annual limit was set to preclude the project from reaching the threshold of 10 tons per year that would subject it to case-by-case MACT (9 VAC 5-60-170).

III.P.7 Defines startup and shutdown for these units for purposes of this Title V permit. The condition refers to time-based definitions in Appendix A that depend on the type of start. The condition adds minimum temperature criteria derived by the SCR vendor during the initial break-in period of the SCR to ensure its proper performance and reported to the DEQ in accordance with Condition 56 j. of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit by letter dated July 8, 2003.

III.P.8 Sets limits on emissions of PM, SO_2, NO_X, and CO from the duct burners. (These limits are in addition to the limits found in III.P.6 for Units 6A and B stack emissions, which include the contribution from duct burner emissions.) The condition is directly from Condition 22 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, which contains the applicable NSPS limits found at 40 CFR Part 60, Subpart Da.

III.P.9 Defines startup and shutdown for the duct burners for purposes of this Title V permit. The condition is derived from Condition 9 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, which assumes that until the fuel throughput levels off following ignition, the duct burners are still in start-up.

III.P.10 Sets visible emission opacity limits. It is from Condition 29 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.P.11 States that the combustion turbines must comply with the applicable NSPS, the current 40 CFR 60 Subpart GG, except for the requirements listed in the condition. The condition is taken directly from Condition 31 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The bases for the exceptions are determinations for similar cases posted on EPA's Applicability Determination Index Control or by general EPA memoranda. Specific citations are given for each exception.

III.P.12 States that the duct burners must comply with the applicable NSPS, the current 40 CFR 60 Subpart Da, except where the permit is more restrictive. It is taken directly from Condition 33 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Monitoring

III.Q.1 States requirement for continuous emission monitoring system (CEMS) for NO_X and O_2 found in Condition 39 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit while satisfying the requirements of 40 CFR 60.334 and Monitoring Requirements section of the 2/28/03 Phase-II Acid Rain Permit.

III.Q.2 States requirement for continuous emission monitoring system (CEMS) for CO and O_2 found in Condition 39 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The basis for the requirement is a reliable means of periodic monitoring.

III.Q.3 Requires 40 CFR Part 75 quality control for NO_X CEMS. CO is not subject to Part 75, but per the amendments of 7/11/08 to the PSD permit issued 10/05/08 and authority granted at 9 VAC 5-50-40 E.10, some Part 75 quality control requirements that can be applied to CO CEMS are applied in this case, as well as appropriate Part 60 requirements. This condition is based on Condition 42 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.Q.4 Requires periodic visual observation, unless a continuous opacity monitor is installed, to check for visible emissions and to follow up, as warranted, with a visible emissions evaluation (VEE) for opacity limit compliance purposes. It is from Condition 51 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. Besides demonstrating compliance with the opacity limit, this condition serves as periodic monitoring for problems that indicate a potential for noncompliance with the emission limits for PM_{10}. If one is required, the VEE must be conducted for at least 12 minutes. See III.B.6 in this S.O.B. for an explanation of the 12 minute VEE.

III.Q.5 Requires compliance with the NO_X monitoring methods found at 40 CFR 60.48a (j) and (k), which are portions of NSPS Subpart Da that apply specifically to duct burners. An alternate method may be approved by the DEQ Air Compliance Manager, presumably after getting concurrence from EPA. The condition is derived from Condition 56i of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, but the citations have been updated.

III.Q.6. States requirement for being equipped to continuously monitor fuel consumption and water to fuel ratio that is found at 40 CFR 60.334. The condition is from Condition 7 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The system must be one that has been approved by the DEQ. This equipment requirement does not invalidate the exception to conducting this monitoring allowed by Condition III.P.11.a.

III.Q.7 States requirement that the NO_X CEMS shall be used to satisfy the Compliance Assurance Monitoring (CAM) requirements of 40 CFR Part 64. That requirement is at 40 CFR 64.3(b).

Recordkeeping

The permit includes requirements (Conditions III.R.1-3) for maintaining records of all monitoring and testing required by the permit. For Units 6A and 6B these records include:

Times of operation of the combustion turbines and duct burners
Hourly and annual throughputs of fuels to both combustion turbines and duct burners
Fuel supplier certifications
Fuel sampling results
Loads each hour on the turbines
CEMS calibrations
Periodic visible emissions checks
Stack tests, VEE's, and CEMS performance evaluations, as required
Occurrence of start-up, shutdown, malfunction, and monitors out of service.

Also included is the requirement in Condition III.R.2.j that emissions be calculated monthly in order that the permittee and an inspector can determine periodically that the unit is in compliance with the emission standards.

Testing

III.S.1 States that the units must be maintained to allow emissions testing. It is a continuation of Condition 52 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, consistent with 9 VAC 5-50-30 F.

III.S.2 Requires periodic testing of VOC emissions to demonstrate compliance with VOC limits upon which offset requirements are based and periodic testing of formaldehyde emissions to demonstrate compliance with the formaldehyde limits upon which the exclusion from MACT is based. The condition is from Condition 49 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment. Permit. Formaldehyde testing may be waived if total VOC is less than the formaldehyde short-term limit, because formaldehyde is a subset of VOC, and cannot have an emission rate greater than VOC.

Reporting

III.T.1 A quarterly excess emissions report (EER) is required for continuous monitor systems data. Items a through c of the condition are taken from Condition 43 of the10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and 9 VAC 5-50-50 C. Item e makes it clear that, unlike for some of the other excess emission reporting requirements of this permit, excess NO_X emissions during startup, shutdown, and malfunction shall be reported for these units as required at 40 CFR 60.334 (j)(1)(iii), found in Subpart GG. Item f states the report format requirement of 40 CFR 60.7(d).

EMISSION UNIT APPLICABLE REQUIREMENTS – Auxiliary Boiler (ID# ES-19)

Note: Most of the conditions for this unit are from conditions in the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit that are written for two auxiliary boilers, but only one such boiler was ever constructed.

Limitations

III.U.1 Sets NO_X control methods for BACT as required by 9 VAC 5-50-260. The condition is from Condition 4 of the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.U.2 Restricts fuel type to ensure possibility of complying with emission limits of this permit. The condition is from Condition 17 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.U.3. Sets a limit on annual fuel consumption to ensure possibility of complying with emissions limits of this permit. The condition is from Condition 12 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.U.4 Sets limits on stack emissions of PM-10, SO_2, NO_X, CO, and VOC. All of the limits are taken from Condition 24 of the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and were in that permit for the following reasons:

PM-10 and CO The short-term limits were established as BACT. Both the short-term and annual limits are rates that were modeled to demonstrate compliance with the NAAQS, and in the case of PM-10, the allowable PSD increment.

SO_2 and NO_X The short-term limits were established as BACT. The annual limits derive from the BACT limits and in combination with other limits of that permit ensure that the basis for netting out of PSD remains valid.

VOC The short-term limits were established as LAER. The annual limit ensures that the obtained offsets are sufficient.

III.U.5 Defines startup and shutdown for the auxiliary boiler for purposes of this Title V permit. The condition is derived from Condition 9 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, which assumes that until the fuel throughput levels off following ignition, the auxiliary boiler is still in start-up.

III.U.6. Sets visible emission opacity limits. It is from Condition 30 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The limits are more stringent than 9 VAC 5-50-80, because only natural

gas is fired, so opacity greater than 10% would indicate that good combustion practices were not being followed (possible violation of 9 VAC 5-50-20 E).

III.U.7 Requires compliance with applicable NSPS 40 CFR 60 Part Dc. It is from Condition 33 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Monitoring

III.V.1 Requires periodic visual observation, unless a continuous opacity monitor is installed, to check for visible emissions and to follow up, as warranted, with a visible emissions evaluation (VEE) for opacity limit compliance purposes. It is from Condition 51 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. If required, the VEE must be conducted for at least 12 minutes. See III.B.6 in this S.O.B. for an explanation of the 12 minute VEE. Besides demonstrating compliance with the opacity limit, this condition serves as periodic monitoring for problems that indicate a potential for noncompliance with the emission limits for PM_{10} and VOC.

Recordkeeping

The permit includes requirements (Conditions III.W.1) for maintaining records of all monitoring and testing required by the permit. For the auxiliary boiler these records include:

Fuel throughput
Records to comply with 40 CFR 60 Subpart Dc
Periodic visible emissions checks
Stack tests and VEE's, as required

Also included is the requirement in Condition III.W.1 that emissions be calculated monthly in order that the permittee and an inspector can determine periodically that the unit is in compliance with the emission standards.

Testing

III.X.1 States that the boiler must be maintained to allow emissions testing. It is a continuation of Condition 52 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, consistent with 9 VAC 5-50-30 F.

III.X.2 Requires periodic testing of NO_X and CO emissions to demonstrate compliance with emission limits upon which offset requirements are based. The requirement is authorized by 9 VAC 5-50-30 G and is consistent with 9 VAC 5-80-490 E.2.

III.X.3 A table of test methods has been included in the permit in case other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no currently applicable reporting requirements. Initial reporting requirements under the applicable MACT (40 CFR 63 DDDDD) and NSPS (40 CFR 60 Dc) have already been met.

EMISSION UNIT APPLICABLE REQUIREMENTS – Nat. Gas Pipeline Heaters (ID# ES-17&18)

Note: Most of the conditions for these units are from conditions in the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, which permitted construction of five pipeline heaters, but only two were constructed.

Limitations

III.Z.1 Restricts fuel type to ensure possibility of complying with the short term emission limits of this permit. Condition is from Condition 16 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.Z.2 Restricts fuel throughput to ensure possibility of complying with the annual emission limits of this permit. Condition is from Condition 25 and 26 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

III.Z.3 & 4 Sets limits on stack emissions of NO_X and CO. The limits are taken from Conditions 25 and 26 of the 10/05/01(amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit and were in that permit for the following reasons:

CO The short-term limits were established as BACT. Both the short-term and annual limits are rates that were modeled to demonstrate compliance with the NAAQS, and in the case of PM-10, the allowable PSD increment.

NO_X The short-term limits were established as BACT. The annual limits derive from the BACT limits and in combination with other limits of that permit ensure that the basis for netting out of PSD remains valid.

III.Z.5 Defines startup and shutdown for the pipeline heaters for purposes of this Title V permit. The condition is derived from Condition 9 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, which assumes that until the fuel throughput levels off following ignition, the pipeline heaters are still in start-up.

III.Z.6. Sets visible emission opacity limits. It is from Condition 30 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The limits are more stringent than 9 VAC 5-50-80, because only natural gas is fired, so opacity greater than 10% would indicate that good combustion practices were not being followed (possible violation of 9 VAC 5-50-20 E).

III.Z.7 Requires compliance with applicable NSPS 40 CFR 60 Part Dc. It is from Condition 34 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Monitoring

III.AA.1 Requires periodic visual observation, unless a continuous opacity monitor is installed, to check for visible emissions and to follow up, as warranted, with a visible emissions evaluation (VEE) for opacity limit compliance purposes. It is from Condition 51 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. If required, the VEE must be conducted for at least 12 minutes. See III.B.6 in this S.O.B. for an explanation of the 12 minute VEE.

Recordkeeping

The permit includes requirements (Conditions III.BB.1) for maintaining records of all monitoring and testing required by the permit. For the natural gas pipeline heaters these records include:

Fuel throughput
Records to comply with 40 CFR 60 Subpart Dc
Periodic visible emissions checks
Stack tests and VEE's, as required

Also included is the requirement in Condition III.BB.1 that emissions be calculated monthly in order that the permittee and an inspector can determine periodically that the unit is in compliance with the emission standards.

Testing

III.CC.1 States that test ports must be installed if and when requested . It is from Condition 52 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, consistent with 9 VAC 5-50-30 F.

III.CC.2 A table of test methods has been included in the permit in case other testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no currently applicable reporting requirements. Initial reporting requirements under the applicable MACT (40 CFR 63 DDDDD) and NSPS (40 CFR 60 Dc) have already been met.

EMISSION UNIT APPLICABLE REQUIREMENTS – All Significant Fuel Burning Units (Combinations of ID#'s ES-3, 4, 5, 6, 7, 8, 9, 11, 13, 14, 15, 16, 17, 18 and 19)

Limitations

III.EE.1 States a pounds-per-hour sulfur dioxide emission limit for the "fuel burning equipment installation," defined at 9 VAC 5-40-890 as all fuel burning equipment in operation prior to October 5, 1979. At Possum Point that is the Units 3, 4, and 5 boilers and the small oil-fired combustion turbines, Units 6 through 11. The limit was determined by the formula at 9 VAC 5-40-930 C (for installations with different fuels fired simultaneously). No solid fuels are fired, so the Y variable equals zero and the formula reduces to the same as in 9 VAC 5-40-930 A.2. The DEQ has determined that in the extremely unlikely case of all of the significant fuel burning units operating at 145 percent of design capacity the whole facility will be in compliance with the limit of this condition, so long as Unit #5 is in compliance with its pounds of SO2 per million Btu's limit found at Condition III.F.2 Therefore, compliance may be demonstrated by maintaining compliance with the Unit #5 SO2 limit and keeping on site a mathematics-based analysis that supports the DEQ determination of compliance with this condition at 145 percent of design capacity operation.

III.EE.2 Limits the total emissions of NO_X from the major electric power producing units (3,4,5, and 6A & 6B) during the ozone season. The condition is derived from a letter addressed to Ms. Pamela F. Faggert, Vice President & Chief Environmental Officer, Dominion Generation and signed by John M. Daniel, Jr., Director, Air Division, dated February 20, 2003. The letter was issued under authority of Section 110 of the Clean Air Act. This condition cannot be satisfied by obtaining emissions reduction credits from outside the Washington, DC nonattainment area,

III.EE.3 Limits the average pounds of NO_X per million Btu's of fuel heat input for the entire plant during the ozone season. The condition is from a combination of Conditions 3 and 8 of the 9/26/00 State Operating Permit (Ozone Attainment). The condition allows compliance by either limiting emissions at the plant or by securing sufficient emission reduction credits through a federally-enforceable emissions trading program or a combination of the two. However, the DEQ may amend the State Operating Permit to exclude or limit the trading program option and, if so, the amendments will considered a part of this permit.

III.EE.4 Places responsibility on permittee to ensure that VOC offsets secured as a requirement under Condition 53 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit remain permanently in place. The responsibility to ensure permanence is from that same Condition 53.

Recordkeeping

III.FF.1 Requires maintenance of records for demonstrating compliance with the SO_2 limits of Condition III.EE.1. These records satisfy 9 VAC 5-40-50 F.

III.FF.2 Requires retention of records for 5 years, as required for NO_X by Condition 7 of the 9/26/00 State Operating Permit (Ozone Attainment) and in general by 9 VAC 5-80-490 F.

III.FF.3 Requires maintaining on site a copy of the Maryland-issued document that shows there are permanent offsets in place for VOC emission increases permitted for the plant by the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. The condition derives from Conditions 54 and 55 of that permit. Note: the emission reduction credits used as offsets were certified in a August 31, 2001 letter from Maryland Department of the Environment (MDE). U.S. EPA concurred with MDE in their letter dated August 31, 2001.

Reporting

III.GG.1 States reporting requirements for demonstrating compliance with the letter issued by John Daniel of the DEQ on February 20, 2003 and the conditions of the 9/26/00 State Operating Permit (Ozone Attainment). This condition satisfies Condition 5 of that permit, which not only requires an annual, post-ozone season report, but states that the DEQ will prescribe the details of monitoring, recordkeeping, and reporting, and include them in the Title V permit. Those details were never prescribed, so they are being initially prescribed in this permit. The condition requires that the format and method of reporting be acceptable to the NRO Air Compliance Manager. At the time this permit was written, the regional office was encouraging reporting by electronic media to reduce paper use, so this possibility is mentioned in the condition.

III.GG.2 Requires notification of the DEQ in the event of a forced outage of a unit for which operation is essential in order for the permittee to comply with the plant-wide NO_X emission limit of Condition III.EE.3. The condition is from Condition 3 of the 9/26/00 State Operating Permit (Ozone Attainment).

III.GG.3 No specific monitoring or reporting by the permittee is required for maintaining the offset credits, but this condition authorized by 9 VAC 5-80-490 G requires the permittee to report that any offsets deficiencies discovered by the DEQ have been corrected.

EMISSION UNIT APPLICABLE REQUIREMENTS – Permanently Shutdown Fuel Burning Equipment

III.HH.1 Declares that reactivation of the shut down Units 1 and 2 boilers, which are not included as significant units in this permit, and therefore, have no emission unit ID numbers, would be subject to new source review permitting under Chapters 50 and 80. The condition is from Condition 8 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit).

EMISSION UNIT APPLICABLE REQUIREMENTS – Boiler maximum achievable control technology (MACT) - applicable to the natural gas pipeline heaters and auxiliary boiler (ID#'s ES-17, 18 & 19)

III.II.1 States that emission Unit ID Nos. ES-17, ES-18, and ES-19 (natural gas pipeline heaters and auxiliary boiler) will be subject to 40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT)) when promulgated, unless the permittee obtains federally enforceable limits on its facility-wide emissions of hazardous air pollutants (HAPs) to below major-source thresholds prior to the first substantive compliance date of the Boiler MACT. The text used is the standard text being applied across the Commonwealth by DEQ to indicate that this proposed rule can encompass these units when promulgated.

EMISSION UNIT APPLICABLE REQUIREMENTS – Above Ground Storage Tank (ID# ES-26)

Limitations

III.IV.A. Limits stored fuel type to type that is already permitted and ensures it would not become subject to 40 CFR 60, Subpart Kb. It is from Condition 20 of the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit.

Monitoring and Recordkeeping

IV.B.1. Requires records to demonstrate compliance with the limitation on fuel type stored. This condition satisfies 9 VAC 5-80-490 E.2.

EMISSION UNIT APPLICABLE REQUIREMENTS – Coal Handling and Storage (ID# ES-12)

Limitations

IV.C.1 Because coal is currently not permitted as fuel at the plant, this condition serves as a reminder that coal use would require permitting action even though the coal-handling facilities continue to be permitted.

IV.C.2 – 5 State conditions from the 09/18/98 Permit to Modify & Operate the coal handling equipment.

IV.C.6 Sets visible emissions limit on the coal-handling facilities. It is from Condition 6 the 09/18/98 Permit to Modify & Operate the coal handling equipment. It also satisfies the visible emissions requirement of the applicable NSPS at 40 CFR 60.252(c), which due to the pre-October 24, 1974 construction date of most of the equipment, applies only to the coal crusher, and does not allow a six-minute period per hour exemption.

IV.C.7 Requires compliance with 40 CFR 60, Subpart Y, for the coal crusher, which is the only major piece of coal-handling equipment constructed after the October 24, 1974 effective date of the rule.

Monitoring

IV.D.1 & 2 Provide periodic monitoring to demonstrate compliance with the limitations and satisfy 9 VAC 5-80-490 E.

Recordkeeping

IV.E.1 & 2 Require recordkeeping sufficient to demonstrate compliance with the limitations. The conditions are from Condition 8 of the 09/18/98 Permit to Modify & Operate and satisfy 9 VAC 5-80-490 E and F.

Reporting

IV.F.1. Requires reporting sufficient to demonstrate compliance with the limitations.

FACILITY WIDE APPLICABLE REQUIREMENTS

Limitations

V.A.1. Requires careful handling of VOC-containing substances to minimize fugitive VOC emissions. The condition is from Condition 6 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit. Although the PSD/Non-attainment permit was not written to include the entire plant, VOC-containing substances used for or around equipment that was included in the permit may find its way to other parts of the plant; therefore, this condition is presumed to apply everywhere at the plant.

Exceptions

V.B.1. States the approvals necessary before applicable requirements that existed prior to the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit being issued can be considered no longer applicable on the basis of being less stringent or equivalent to conditions of that permit or alternate measures proposed as equivalent. "Streamlining" through the Title V process has accomplished much the same thing, but the condition is in the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit (as Condition 6) and may still be applied, though this Title V permit would also require amending.

V.B.2 States what types of units are exempted from RACT requirements. It is from Condition 11 of the 7/21/00 State Operating Permit (NO_XRACT).

Recordkeeping

V.C.1. Requires records as necessary to support claims of RACT-exempt status. The condition is from Condition 14 of the 7/21/00 State Operating Permit (NO_XRACT).

Relationship of Consent Decree

V.D.1 Explains that the consent decree entered by the United States District Court for the Eastern District of Virginia, Civil Action Nos. 03-CV-517-A and 03-CV-603-A, on October 10, 2003 between Virginia Electric Power Company and the United States of America, et al. (referred to for purposes of this permit as the "Consent Decree"), for all provisions affecting the operation or permitting of the Possum Point Power Station, is to be considered an enforceable part of this permit. This condition is appropriate because the Consent Decree is a federally-enforceable document and its inclusion is with the concurrence of U.S. EPA by e-mails from Sharon McCauley, Permits and Technical Assessment Branch, Air Division, to John McKie, DEQ, dated July 18, 2007, and December 23, 2008. In response to EPA specifically requesting that Consent Decree Paragraph 136 or it's "netting

limits" provisions be included in this Title V permit, this permit condition specifically names (but does not limit to) that paragraph as one that must be complied with in the permitting process when relevant. The condition also states that where there may be a conflict between the Consent Decree and other text of this permit, the more stringent requirements shall prevail. Much of the text of this condition was provided by the applicant with additions made by DEQ as deemed necessary by DEQ and the U.S. EPA.

Streamlined Requirements

The following (summarized) conditions in the 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit have not been included for the reasons provided in italics:

Condition 1. - The facility is to be modified and operated as represented in the permit application dated July 13, 2000, including amendment information dated: October 25, 2000; March 1, 2001; May 31, 2001; June 11, 2001; July 17, 2001; August 14, 2001; August 16, 2001; August 17, 2001; August 20, 2001; and July 12, 2002; and if further modified, may require more permitting. *The modifications have already been made in accordance with the permit. Operational limitations and the necessity of getting a permit if further modified are covered by other conditions of the Title V permit, including the General Conditions.*

Condition 8. – Requires certification to the DEQ that Units 1 and 2 have been shut down. *This was already done by letter from M.G. Deacon to Charles Forbes, dated March 10, 2003.*

Condition 9. – Provides definition of start-up and shutdown, partially based on criteria to be determined. *The criteria have already been determined and are included in the Title V permit under various conditions.*

Conditions 27. & 28. – Give emission limits for two pipeline heaters not included in the Title V permit. *These units were never constructed, and if built in the future, would require new permitting action.*

Condition 35. – For the 2 million gallon above ground fuel oil storage tank requires compliance with NSPS at 40 CFR 60, Subpart Kb. *A revision was made to the Subpart that resulted in it no longer applying to tanks storing liquids of such low vapor pressure.*

Condition 36. – States that other applicable permits are not superseded. *Inclusions into the Title V permit of requirements from the other permits make this condition unnecessary.*

Condition 41. - Requires CEMS evaluations. *These evaluations were completed in 2003.*

Conditions 42. through 48. – Require initial emissions compliance (stack) tests. *These tests completed in 2003.*

Condition 52. – Requires testing ports to be put on the flues or stacks from Units 3, 4, 6A, 6B, the auxiliary boilers, and the pipeline heaters. *This was done when the units were constructed. Unit-specific conditions in the Title V permit require that the ports are maintained.*

Condition 56. – Lists initial notification requirements. *The notifications have been completed.*

Condition 57. – Requires construction to begin within 18 months of permit issuance and to maintain continuous construction. *The modifications were made within the allotted time frame, except for one auxiliary boiler and two pipeline heater, which were deemed no longer necessary.*

The following (summarized) conditions in the 7/21/00 State Operating Permit have not been included for the reasons provided in italics:

Condition 1. – States that the permit does not supersede other applicable permits and regulatory requirements. *Inclusions into the Title V permit of requirements from the other permits make this condition unnecessary.*

Conditions 4., 6., 8. & 9. – Describe RACT limitations that apply prior to the state operating permit being included by EPA into the State Implementation Plan (SIP). *The permit was included into the SIP on January 1, 2001.*

All conditions of the June 12, 1995, Consent Agreement, except those pertaining to VOC RACT, were vacated by letter to A.W. Hadder, Virginia Power, from Alice G. Nelson, DEQ, dated October 31, 1996. NO_X RACT requirements are stated in the 7/21/00 State Operating Permit.

The following (summarized) conditions in the 9/26/00 State Operating Permit have not been included for the reasons provided in italics:

Condition 1. – States that the permit does not supersede other applicable permits and regulatory requirements. *Inclusions into the Title V permit of requirements from the other permits make this condition unnecessary.*

Condition 4. – States that compliance must begin in 2003. *Inasmuch as 2003 is in the past, the Title V permit is written so that compliance is expected now and hereafter.*

The following (summarized) condition in the 9/18/98 to Construct and Operate a Replacement Coal Crusher has not been included for the reason provided in italics:

Condition 1. - The facility is to be modified and operated as represented in the permit application dated July 13, 2000, including amendment information dated August 31, 1998; and if further modified, may require more permitting. *The modifications have already been made in accordance with the permit. Operational limitations and the necessity of getting a permit if further modified are covered by other conditions of the Title V permit, including the General Conditions.*

The following (summarized) conditions in the 02/07/73 Permit to Construct and Operate an 8050 million Btu/hour oil-fired boiler have not been included for the reasons provided in italics:

Condition 1. – Requires quarterly construction status reports. *The requirement has been completed.*

Condition 2. – Requires notification of the state agency prior to initial emissions performance testing. *The requirement has been completed.*

No requirements of 40 CFR Part 64 (Compliance Assurance Monitoring (CAM)) have been included, except for 40 CFR 64.3(b), because 40 CFR 64.3(b) states that a CEMS required pursuant to other authority under the Clean Air Act or state or local law shall satisfy the requirements of that Part. This is the case for the NO_X CEMS on Units 6A & B, the only units for which Part 64 is currently applicable. The CEMS requirement for those units is included in the Title V permit at Condition III.Q.1

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-490 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".

[This general condition cite(s) the Article(s) that follow(s):
Article 3 (9 VAC 5-80-360 et seq.), Part II of 9 VAC 5 Chapter 80. Acid Rain Operating Permits for Stationary Sources]

[This general condition cites the sections that follow:
9 VAC 5-80-430. Application
9 VAC 5-80-500. Permit Shield
9 VAC 5-80-510. Action on Permit Applications]

9 VAC 5-80-490 D. states that the permit shall set an expiration date "reflecting a fixed term of five years." As issued initially on January 20, 2009, this permit had an expiration date that extended beyond the five-year term of the Title IV Acid Rain permit that was attached as a separate document. In order to make concurrent the terms of the Title IV and Title V permits, so that adherence to 9 VAC 5-80-490 D would not result in a continued conflict with the Title IV permit issuance and expiration dates or with the Department's Title V Permit Manual, which states that for renewals the effective/issuance date and expiration dates will be the same for the combined/renewed permits, the initial term of this combined permit has been shortened to four years as part of the second modification to the permit issued January 20, 2009. The term length and effective/issuance and expiration dates are also presented on the signature page of the permit.

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-650 of the Acid Rain Operating Permit regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Acid Rain Operating Permit facilities. Section 9 VAC 5-80-650 is from the Acid Rain Operating Permit regulations. Acid Rain Operating Permit facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC

5-80-650. The report must be made within four daytime business hours of discovery of the malfunction.

[In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.]

[This general condition cites the sections that follow:

[9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
9 VAC 5-40-50. Notification, Records and Reporting
9 VAC 5-50-50. Notification, Records and Reporting]

[This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.]

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-360. Applicability, Acid Rain Operating Permit For Stationary Sources
9 VAC 5-80-550. Changes to Permits.
9 VAC 5-80-660. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas]

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

[This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-490. Permit Content]

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

[This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.]

[This general condition cites the regulatory sections that follow:
9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-490. Permit Content]

CC. Temporary Suspension of Enforcement

Added as part of the first modification to the permit issued January 20, 2009, is this condition that is a word-for-word restatement of the statutory language from the Virginia Air Pollution Control Law that allows the permittee to request the DEQ Executive to suspend enforcement of regulations or permit conditions that pertain to equipment and operations affected by a *force majeure* event. Such a situation is described at the modified Condition III.N.1 for black start operation; therefore, inclusion of this condition as requested by the permittee was deemed by DEQ to be appropriate.

DD. Carry Over of Fifth-Year Requirements

Added as part of the second modification to the permit issued January 20, 2009, this condition serves to ensure that no requirement in any condition is dropped because of the reduction in permit term length from five years to four years that was included in the second modification.

STATE ONLY APPLICABLE REQUIREMENTS

The following specific requirements are only enforceable by the State and have been identified as applicable by the applicant:

Condition 67 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, emission limits of four toxic pollutants. The condition is found in the "State Only Enforceable Requirements Section of that otherwise federally-enforceable permit. Virginia Administrative Code citations given for the condition are 9 VAC 5-50-160 and 9 VAC 5-50-180, which have been repealed and replaced by 9 VAC 5-60-300 and 9 VAC 5-60-320.

Condition 68 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, compliance with Condition 67 above. Virginia Administrative Code citation given for that condition is 9 VAC 5-50-220, which has been repealed and replaced by 9 VAC 5-60-360.

Condition 69 of 10/05/01 (amended 11/18/02, 12/8/04 , 7/11/08 and 5/20/2011) PSD/Non-attainment Permit, reporting compliance with Condition 67 above. Virginia Administrative Code citation given for that condition is 9 VAC 5-50-50, which is normally federally-enforceable, but in this case is used to report results for compliance purposes of the state-only enforceable 9 VAC 5-60-360, so would not be considered federally-enforceable.

FUTURE APPLICABLE REQUIREMENTS

40 CFR Part 64 Compliance Assurance Monitoring requirements (The CAM Rule) will apply to Unit 5 for PM_{10} at the first renewal of the Title V permit. Uncontrolled (and controlled) emissions of PM_{10} exceed major (100 TPY) levels. They are controlled by cyclones to assist in meeting the limit set by NSPS at 40 CFR Subpart D, which was in effect prior to November 15, 1990.

40 CFR Part 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters) (Boiler MACT) applies to the natural gas pipeline heaters (ES-17 and ES-18) and the auxiliary boiler (ES-19) as boilers or process heaters at a major source of Hazardous Air Pollutants (HAP) in the large gaseous fuel subcategory. This applicability is declared at Condition III.II.1. However, the final rule was not published in the Federal Register until March 21, 2011, the same date as the public comment period ended. Therefore, the general statement in the draft permit that the auxiliary boiler and natural gas pipeline heaters are subject to that subpart when promulgated is being left unchanged. The March 21 Federal Register stated that the requirements of the final rule would apply effective May, 20, 2011, but EPA announced on May 16, 2011, that a stay would be issued to postpone the effective date until at least after additional comments could be received through July 15, 2011. Specific applicable requirements are expected to be included in the permit when reopened for the renewal due January 1, 2013.

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INAPPLICABLE REQUIREMENTS

New Source Performance Standards (NSPS) in 40 CFR Part 60 Subparts Ka and Kb for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) are not currently applicable to the fuel storage tanks. Subpart Kb has been revised to exempt all tanks containing liquids of vapor pressure less than 3.5 kPa, which the 2 million gallon tank constructed in 2003 does. The other large storage tanks (ID#'s 27, 28, and 29) are exempt from Subparts Ka and Kb, because the tanks were constructed prior to May 18, 1978. *This requirement was identified by the applicant (e-mail from Dawn Garber to John McKie, dated November 14, 2006) as being inapplicable.*

The Units 6A and 6B combustion turbines are not subject to NSPS at 40 CFR 60 Subpart KKKK for Stationary Combustion Turbines, because they were constructed before February 18, 2005, but are subject to the similarly named NSPS at 40 CFR 60 Subpart GG. These units are not subject to MACT "requirements" at 40 CFR 63 Subpart YYYY, National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines, and not to Subpart A, according to 63.6090(b)(4), because they were constructed before January 14, 2003.

The auxiliary boiler (ES-19) and the natural gas pipeline heaters (ES-17 and ES-18) are subject to 40 CFR 63 Subpart DDDDD, but according to §63.7506(b) these units, as existing (commenced construction prior to January 14, 2008) large (heat input rate greater than 10 MMBtu/hour) gaseous fuel units are subject only to initial notification requirements,"i.e., they are not subject to the emission limits, work practice standards, performance testing, monitoring, SSMP, site-specific monitoring plans, recordkeeping and reporting requirements of this subpart or any other requirements."

The Chemical Accident Prevention Provisions at 40 CFR Part 68 do not apply to the ammonia tanks for the SCR control on Units 6A and 6B, because the ammonia is in aqueous solution at a concentration of less than 20%, which is specifically exempted by 40 CFR Part 68 §130 (b). *This requirement was identified by the application dated August 1, 2002, as being inapplicable.*

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

Unit #5 at Possum Point Power Station was subject to BART requirements based on its age and potential emissions of visibility-impairing pollutants (PM10 , NO_X, and SO_2). USEPA determined that, as a whole, the CAIR cap-and-trade program improved visibility more than implementing BART for individual sources in states affected by CAIR. States that opted to participate in the CAIR program were not mandated to require affected BART-eligible EGUs to install, operate, and maintain BART for SO_2 and NO_X emissions. VDEQ participated in CAIR and accepted USEPA's overall finding that CAIR substituted for BART for NO_X and SO_2. Also under the BART guidelines, VDEQ exempted sources from BART if that source did not cause or contribute to visibility impairment in a Class I area. In accordance with the guidelines, VDEQ used a contribution threshold of 0.5 deciview (dv) to determine which sources were subject to BART. Dominion submitted an evaluation of Boiler #5's PM10 emissions on visibility in nearby Class I areas. This evaluation demonstrated that the maximum visibility impact to any nearby Class I area was less than 0.5 dv. VDEQ proposed to exempt this unit from further BART requirements in appropriate newspapers during the week of January 19, 2007. No adverse comments were received, and correspondence dated June 8, 2007, from the National Park Service concurred with these exemptions. BART analyses and modeling as well as detailed information on the regional haze long term strategy may be found in Chapter 7 and Appendix H of Virginia's regional haze SIP revision, which was submitted to EPA in final form on October 4, 2010.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-490.

Insignificant emission units include the following:

Emis-sion Unit No.	Emission Unit Description	Citation (see footnotes)	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
IS-1	Coal Railcar Thaw Shed Burners	Size/capacity†††	CO, NO_X, PM_{10}, SO_2	Total 8.8 million Btu/hr
IS-2	*	NA	NA	NA
IS-3A	Combustion Turbine No.3 Blackstart Diesel Generator	Size/capacity†††	CO, NO_X, PM_{10}, SO_2	300 hp
IS-3B	Combustion Turbine No.4 Blackstart Diesel Generator	Size/capacity†††	CO, NO_X, PM_{10}, SO_2	300 hp
IS-4	Lube Oil Systems/Waste OilSystems/Hydraulic Oil Systems	Emission Level††	VOC	NA
IS-8	Gasoline Tank	Emission Level††	VOC	3,000 gallons
IS-9	Kerosene Tank	Emission Level††	VOC	2,000 gallons
IS-10	Combustion Turbine No.3 & No. 4 Blackstart Diesel Generator Fuel Tank	Size/capacity†††	VOC	110 gallons
IS-11	Anitfreeze Usage on Coal Conveyors	Emission Level††	VOC	NA
IS-12	Oily Waste Pond	Emission Level††	VOC	450,000 gallons
IS-13	Flyash Handling System	Emission Level††	PM_{10}	NA
IS-14	Ash Storage Ponds	Emission Level††	PM_{10}	NA
IS-15	Fuel Additive System	Emission Level††	VOC	NA
IS-16	No.2 Fuel Oil Truck Unloading/Loading Station	Emission Level††	VOC	NA
IS-21	Cooling Tower	Emission Level††	PM_{10}	178,000 gallons/min

† 9 VAC 5-80-720 A. - Listed Insignificant Activity, Not Included in Permit Application

†† 9 VAC 5-80-720 B. - Insignificant due to emission levels
†††9 VAC 5-80-720 C. - Insignificant due to size or production rate
* A pressurized propane tank was listed in the application for this emission unit number. According to an e-mail (attached comments) dated October 10, 2008, from William Scarpinato (Dominion) to John McKie (DEQ), the tank has been removed from the site and should no longer be listed. A line for the emission unit number IS-2 remains in the table in this document and the permit to indicate that a unit numbered IS-2 was not inadvertently left out.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

FOR THE PERMIT ISSUED JANUARY 20, 2009

The draft permit was placed on public notice in the *Washington Times* on February 14, 2007 for public comment from February 14, 2007 to March 19, 2007.

Summary of Comments and Responses

Comments were submitted by just two parties: the Office of the Attorney General for the State of New York (New York); and the applicant, Dominion Resources, Inc (Dominion). Although the Region III office of the U.S. EPA (EPA) was provided copies of the permit documents, the EPA did not submit comments during the comment period. The EPA did provide input later concerning the comments received from New York, as explained below.

The fourteen comments received from Dominion covered a wide range of subjects, from a simple correction of the name of the Acid Rain representative for the permittee to a suggestion to relax proposed periodic monitoring requirements. The DEQ has determined that most, but not all, of the comments either have merit or the desired revisions sought in the comments have no significant downside. Therefore, the permit has been revised to accommodate most of the Dominion comments, though some of those accommodations include stipulations not requested. The most substantive denial of a request for revision was for Dominion's request that visible emission observations (VEO) be substituted for once per five years PM testing on the peaking combustion turbines. Even so, the DEQ did revise the subject condition (III.N.1) to consider future substitution of a visible emissions evaluation (VEE) for performance testing if such a relaxation is validated in advance by a combination of VEE and PM testing specified in this permit. The permit was also revised to allow up to 24 months, rather than 12, following permit issuance to conduct the first tests. DEQ, recognizing the technical difficulty of testing these particular combustion turbines, extended the time for testing to allow for possible amending of this permit in the interim if Dominion can propose an effective alternate means of demonstrating compliance with the PM emission limit. In response to a related comment on new periodic monitoring requirements, the requested reductions in frequency of the visible emissions observations on peaking combustion turbines and of the particulate matter (PM) tests on Unit 5 have been granted in deference to Dominion's contention (which this DEQ office confirmed) that the requirements were inconsistent with those of the other DEQ regional offices.

New York commented that several provisions of a federal consent decree issued in October, 2003 are relevant to (but not included in) the draft permit, and in particular, the annual NO_X limit of 219 tons for Units 3 and 4 combined should be in the Title V permit, The DEQ was uncertain as to whether provisions of the consent decree, even though they are clearly federal requirements, are considered appropriate content of a Title V permit. The DEQ posed that question to the EPA. After deliberating on the issue, the EPA informed the DEQ that the 219 tons per year limit should appear in the Title V permit. Therefore, that limit from the consent decree has been added to the emission limits tables for Units 3 and 4 in the proposed Title V permit. Also, as a consequence of the EPA determination regarding consent decree inclusion, Dominion submitted a revised permit application, dated December 13, 2007, which includes all of the provisions from the consent decree that Dominion believes should be in the Title V permit. In one form or another, those provisions have been added to the permit.

The complete set of comments and responses is appended to this statement of basis.

FOR THE MODIFICATION ISSUED FEBRUARY 10, 2010

The draft permit was placed on public notice in the *News Messenger* on December 18, 2009 for public comment from December 21, 2009 to January 20, 2010. The draft permit was also submitted to U.S. EPA Region III for review as a draft and concurrently for review as a proposed permit, given that no public comments were expected.

Summary of Comments and Responses

No comments were received.

FOR THE PROPOSED MODIFICATION

The draft permit was placed on public notice in the *News Messenger* on February 18, 2011 for public comment from February 22 to March 21, 2011. The draft permit was also submitted to U.S. EPA Region III for review as a draft and concurrently for review as a proposed permit, given that no public comments were expected.

Summary of Comments and Responses

No comments were received from the public. U.S. EPA did submit comments, which DEQ received by e-mail on March 10, 2011. The DEQ reviewed the comments and determined that most of them did not pertain to the proposed modification. Many of the U.S. EPA comments pertain to the PSD/Non-attainment permit that is the basis for many of the conditions in the Title V permit. As a result of a conversation between the DEQ Northern Regional Office (NRO) Air Permit Manager and Ms. Kathleen Cox, U.S. EPA Region-III Associate Director for Office of Permitting and Air Toxics, DEQ determined that those comments that do not pertain to the proposed modification, with the exception of one comment that correctly noted a typographical

error in this Statement of Basis, should not be addressed in this permitting action. Those comments should be reserved for the reopening of the permit when its renewal is due.

The typographical error in the Statement of Basis was that the basis for a condition shown as being Condition III.U.3 is actually for Condition III.U.4. That error was corrected, and a basis for Condition III.U.3 was inserted.

One of the U.S. EPA comments does pertain to the modification, because it requested an update to what was added in the permit as part of the modification regarding 40 CFR Part 63, Subpart DDDDD, the so-called "Boiler MACT." Because the final rule for that subpart was not issued until the draft permit modification had gone to public hearing, and because the wording was still technically correct, DEQ felt it was inappropriate to revise the text until the permit is reopened for its renewal.

The full response to U.S. EPA's comments is attached.